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(71) Applicant (for all designated States except US): **CORE-OPTICS INC.** [US/US]; c/o The Corporation Trust Center, 1209 Orange Street, City of Wilmington, Delaware 19801 (US).

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(72) Inventors: **LANGENBACH, Stefan** [DE/DE]; Virchowstrasse 34a, 90409 Nürnberg (DE). **STOJANOVIC, Nebojsa** [YU/DE]; Wittelsbacherstr. 8, 80469 München (DE).

(74) Agent: **HELLMICH, Wolfgang**; Ernsbergerstrasse 14, 81241 München (DE).

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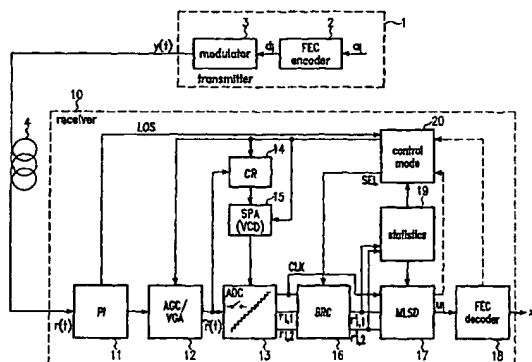
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(54) Title: CHANNEL ESTIMATION AND SEQUENCE ESTIMATION FOR THE RECEPTION OF OPTICAL SIGNAL



(57) Abstract: The application relates to channel estimation. The method comprises digitizing an analogue signal representing a sequence of symbols thereby associating one digital word with the level of said analogue signal at each sampling time. The most likely sequence of symbols is detected. To this end branch metrics are provided. According to one embodiment, a symbol period comprises at least two sampling times. Moreover the branch metrics are obtained from frequencies of digital words resulting from a digitizing and the symbols of the most likely sequence. According to another embodiment a symbol period comprises at least one sampling time. Events are counted wherein each event is defined by a channel state and a current digital word. Each channel state is defined by a pattern of symbols relative to a current symbol determined at the time of a current digital word. A model distribution is fitted to event counts and a branch metrics is obtained from the fitted model distribution. Moreover the invention relates to corresponding symbol detectors for optical receivers.

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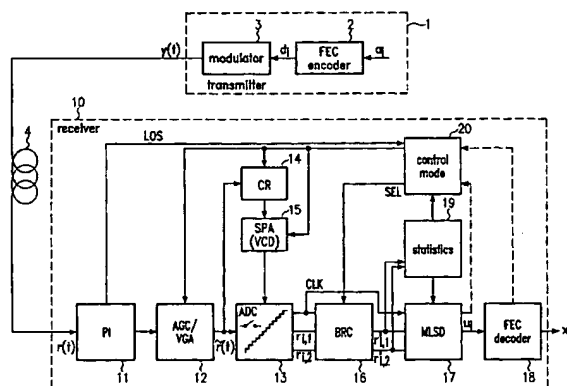
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